

Amendment and Response Under 37 C.F.R. 1.116

Applicant: N. Lee Rhodes

Serial No.: 09/919,149

Filed: July 31, 2001

Docket No.: 10013112-1 / H300.177.101

Title: NETWORK USAGE ANALYSIS SYSTEM HAVING DYNAMIC STATISTICAL DATA
DISTRIBUTION SYSTEM AND METHOD

REMARKS

The following remarks are made in response to the Final Office Action mailed September 8, 2005. Claims 1, 2, 4-9, and 16-21 were rejected. Claims 3, 10-15, and 22 have been objected to. With this Response, claims 3, 10, 13, 14, and 22 have been amended. Claims 1-22 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 4-8, 16, 18, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Friedrich et al., U.S. Patent No. 5,958,009 ("Friedrich"), and further in view of Marshall et al., "Statistics of Mixed Data Traffic on a Local Area Network" ("Marshall").

Applicant submits that Friedrich and Marshall, either alone, or in combination, fail to teach or suggest the invention of independent claims 1, 16, and 20. Independent claim 1 recites a method for substantially real-time analyzing a stream of data comprising determining a data distribution representative of the stream of data, including creating data bins on an as needed basis based on the stream of data. Independent claim 16 recites a system for analyzing a stream of data comprising determining a data distribution representative of the stream of data, including configured to create data bins on an as needed basis based on the stream of data. Independent claim 20 recites a computer-readable medium having computer executable instructions for performing a method for substantially real-time analyzing of a stream of data comprising determining a data distribution representative of the stream of data, including creating data bins on an as needed basis based on the stream of data.

Friedrich discloses a measurement system and method of instrumenting a computer program for efficiently monitoring the quality of service in a distributed processing environment. A plurality of interconnected network nodes in a computer system with an application process operating on each network node is provided. At least one intelligent sensor is associated with each application process. Each intelligent sensor selectively collects data about at least one of the network nodes upon which the associated application process operates. An observer is associated with each application process and filters out unchanged

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and zero values from the data collected by the at least one intelligent sensor. A collector is logically associated with each network node. The intervalized collected data is asynchronously received into the collector periodically pushed from the observer. An analyzer is associated with the distributor processing environment and correlates the intervalized collected data. The intervalized collected data is asynchronously received into the analyzer periodically pushed from the collector. (Abstract).

Marshall discloses analyzing data traffic on a DATAKITTM Virtual Circuit Switch network. Comparable fractions of the data traffic are generated by terminal to host calls, by indirect logins, by interactive remote command executions, and by host to host file transfers. Histograms are displayed representing the distributions of interarrival times and call lengths associated with the various types of calls, and the distributions of transmission bursts and individual calls. Typical distributions are characterized by their means and coefficients of variation. A model is proposed for time-sharing traffic that depends on a relatively small number of parameters and statistical distributions. (Abstract).

The Examiner admits the Friedrich fails to disclose **creating data bins on an as needed basis based on the stream of data**. (Office Action, page 3). Marshall also fails to disclose this claim limitation. Marshall discloses histograms, but the histograms were generated after collecting all the data. Marshall does not disclose creating data bins on an as needed basis based on the stream of data.

The Examiner states that claims 1, 16, and 20 can be interpreted in a way where the data bins can be created after collecting all the data since the bins are seen as created on an as needed basis (i.e., different number of bins for different tests run). The Examiner states that there is no indication in the claims that the data bins are created on the fly as the stream of data is being received. (Office Action, page 3). The Description of the Preferred Embodiments section of the specification of the current application, however, on page 8 starting on line 22 states: "The present invention provides for the bins to be created on an as needed basis ("on-the-fly") based on the values of the incoming usage data." Therefore, the specification defines "on an as needed basis" as "on-the-fly." Marshall fails to teach or suggest that the bins are created on the fly.

In view of the above, a person having ordinary skill in the art could not combine Friedrich and Marshall and arrive at the invention of independent claims 1, 16, and 20.

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Dependent claims 4-8 further define patentably distinct claim 1. Dependent claim 18 further defines patentably distinct claim 16. Accordingly, Applicant respectfully submits dependent claims 4-8 and 18 are also allowable over the cited references. Allowance of claims 1, 4-8, 16, 18, and 20 is respectfully requested.

Claims 2, 9, 17, 19, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Friedrich in view of Marshall as applied to claims 8 and 16 above, and further in view of Rueda et al., U.S. Patent No. 6,597,660 ("Rueda").

Dependent claims 2, 9, 17, and 19 further define patentably distinct claims 1 or 16. Accordingly, these dependent claims are also believed to be allowable over the cited references.

Independent claim 21 recites **creating data bins on an as needed basis based on the stream of data**. As discussed above with reference to claims 1, 16, and 20, Marshall fails to teach or suggest this claim limitation. Accordingly, Applicant respectfully submits that independent claim 21 is also allowable over the cited references.

In view of the above, a person having ordinary skill in the art could not combine Friedrich, Marshall, and Rueda and arrive at the invention of independent claim 21. Allowance of claims 2, 9, 17, 19, and 21 is respectfully requested.

Allowable Subject Matter

The Examiner objected to claims 3, 10-15, and 22 for being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims. Applicant has rewritten claims 3, 10, 13, 14, and 22 into independent form. Dependent claims 11, 12, and 15 further define patentably distinct claims 10 or 14. Allowance of claims 3, 10-15, and 22 is respectfully requested.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-22 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-22 is respectfully requested.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to either William J. Streeter at Telephone No. (970) 898-3886, Facsimile No. (970) 898-7247, or Steven E. Dicke at Telephone No. (612) 573-2002, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 8 day of November, 2005.

By Steven E. Dicke
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